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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,014	04/10/2001	Thomas Scharfe	P 279247 000121 FH	9559

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EXAMINER
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HAILEY, PATRICIA L

ART UNIT	PAPER NUMBER
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1755

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DATE MAILED: 03/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-6

<b>Office Action Summary</b>	<b>Application No.</b> 09/829,014	<b>Applicant(s)</b> SCHARFE ET AL.	
	<b>Examiner</b> Patricia L. Hailey	<b>Art Unit</b> 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
    If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
    a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

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|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4,5</u> . | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**4. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangold et al. (U. S. Patent No. 6,328,944) in view of Cochrane (U. S. Patent No. 5,116,535, Applicants' submitted art).**

Mangold et al. teach doped pyrogenically prepared oxides. They are doped with one or more doping components in amounts of 0.00001 to 20 wt. % (based on the total amount of pyrogenic oxide and doping component), wherein the doping amount ranges from 1 to 10,000 ppm. The doping components are non-metal and/or metal, a non-metal salt and/or a metal salt, or an oxide of a metal and/or a non-metal. The doped oxides have BET surface areas between 5 and 600 m<sup>2</sup>/g. See col. 1, lines 30-40 of Mangold et al.

Exemplary pyrogenic oxides include silica; exemplary doping components include transition metals and noble metals. See col. 2, lines 46-58 and col. 3, lines 5-25 of Mangold et al.

The doped oxides are prepared via aerosol technology and flame hydrolysis, wherein the doping medium is finely distributed in the gas phase during the initial stages of production of the pyrogenic oxide, so that homogeneous incorporation of the doping component in the pyrogenically prepared oxide is possible. See col. 2, line 5 to col. 3, line 4 of Mangold et al.

The doped oxides can be used as, for example, fillers, starting materials for preparing dispersions, as polishing materials, in the lacquer industry, etc. See col. 3,

lines 26-36 of Mangold et al. This disclosure is considered to read upon the claim limitation "coating mixture".

While Mangold et al. disclose that the doped pyrogenic oxides are useful as starting materials for preparing dispersions, this reference does not disclose a method for preparing dispersions.

Cochrane teaches aqueous dispersions of fumed silica, wherein the silica is produced by flame hydrolysis of silicon tetrachloride (as also done by Mangold et al., see col. 2, line 5-41). The dispersions have silica concentrations of at least about 35% by weight. See col. 3, lines 51-61 of Cochrane.

The dispersions are prepared by admixing the fumed silica (which has a surface area ranging from about 10 and 75 m<sup>2</sup>/g, see col. 3, lines 17-27 of Cochrane) with water in a mixer such as a high shear mixer. See col. 4, line 4 to col. 5, line 38 of Cochrane.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce dispersions of the pyrogenic oxides of Mangold et al. via the process of Cochrane and thus obtain Applicants' claimed dispersion and the claimed method of preparing it, because both the doped oxide and the fumed silica are prepared by the same method (flame hydrolysis) and exhibit substantially the same surface areas. Further, because the pyrogenic doped oxides of Mangold et al. are useful starting materials for preparing dispersions (see col. 3, lines 26-29 of Mangold et al.), one of ordinary skill in the art would expect that any known method for preparing

dispersions, such as that disclosed by Cochrane, can be performed with the doped oxides of Mangold et al. as starting materials.


*Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (703) 308-3317. The examiner can normally be reached on Mondays-Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on (703) 308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

  
Lynn Hailey/plh  
Examiner, Art Unit 1755  
March 7, 2002

  
Mark L. Bell  
Supervisory Patent Examiner  
Technology Center 1700